

BOTANY.—*Veronica connata* Rafinesque.<sup>1</sup> NORMAN C. FASSETT, University of Wisconsin.

In his *Scrophulariaceae of eastern temperate North America*,<sup>2</sup> Dr. F. W. Pennell took up the name *Veronica connata* Raf.<sup>3</sup> for the plant that he had previously described as *V. catenata* Pennell.<sup>4</sup> This species, he wrote, is the only member of the group in western Kentucky, where Rafinesque had stated that *V. connata* was found, and the description is excellent except for specifying connate and entire leaves, whereas the plant to which Dr. Pennell applies the name has clasping and slightly crenate-serrate leaves.

Prof. M. L. Fernald<sup>5</sup> rejected Rafinesque's name as "very incorrectly or erroneously described and wholly doubtful . . . which was assigned perfoliate and entire leaves such as are not found in our plant." He concluded that the earliest valid name for the species was *V. salina* Schur.<sup>6</sup>

Unfortunately these opinions are more or less subjective. Dr. Pennell emphasizes the parts of Rafinesque's description that apply well, and minimizes those that do not, while Dr. Fernald dwells upon the mention of perfoliate and entire leaves. The question seems to resolve itself into whether Rafinesque might have called the leaves of the plant in question connate and entire.

That the leaves clasp the stem with their bases in contact but not connate is clear from plates 582 and 583 of Professor Fernald's paper, provided only that one has previously examined actual plants under a lens. The writer submitted these plates to several of his colleagues, who are not familiar with the plants, asking, "Are they connate or only clasping?" All agreed that it was hard to tell; several thought that some were connate, especially those of figure 1 on plate 582. Had Rafinesque had such an individual perhaps he would have been justified in calling the leaves connate.

Examination of figure 1 on plate 582

suggests that Rafinesque might well have called the leaves entire. Some of the margins are undulate, but there is scarcely a *bona fide* tooth shown. On the same plate he might have seen at least four unmistakable teeth just above and to the right of the "2." From a study of plate 583 he would probably have decided that the leaf-margins were toothed. These plates represent very well what one finds in examination of actual specimens: the margins of the leaves range from definitely toothed to weakly undulate and practically entire.

If, as Dr. Pennell believes and Dr. Fernald does not, Rafinesque was describing the plant in question and erred in calling the leaf-margins entire, his error was independently repeated by many subsequent botanists with more enviable reputations for accuracy. Robinson and Fernald in edition 7 of Gray's *Manual of botany* describe the leaves of *Veronica anagalis-aquatica* (including the species here under consideration) as "serrate or entire"; Wiegand & Eames, in the *Flora of the Cayuga Lake Basin*, key *V. Anagalis-aquatica* var. *glandulosa* (cited by Pennell as a synonym of *V. connata*) under "leaves entire, or obscurely crenate-serrate"; Rydberg, in the *Flora of the prairies and plains*, describes the leaves of *V. catenata* (the name later thrown by its author into synonymy with *V. connata*) as "finely serrate or entire"; Steyermark, in the *Spring flora of Missouri*, specifies for *V. connata*, "leaves . . . smooth-edged or short-toothed"; and Dr. Pennell's original description of *V. catenata* reads "crenate to nearly entire."

As Dr. Fernald notes, this species occurs in a glabrous western phase and a glandular eastern phase. Dr. Pennell's map shows this clearly; the two phases intermingle in those two problem regions, the Ozarks and the Driftless Area. It is somewhat surprising, then, to see Dr. Fernald treat these two phases as forms rather than varieties. The present writer, perhaps because he received his botanical training from Professor Fernald, has held to the principle that intraspecific variations showing geographic segregation are best treated as varieties,

<sup>1</sup> Received May 19, 1947.

<sup>2</sup> Acad. Nat. Sci. Philadelphia Mon. 1: 365. 1935.

<sup>3</sup> Med. Fl. 2: 110, 1830; emended in Atl. Journ. 1: 150, 1832, and New Fl. N. Am. 4: 37, 1838.

<sup>4</sup> Rhodora 23: 37, 1921.

<sup>5</sup> Rhodora 41: 566-568, 1939.

<sup>6</sup> Enum. Pl. Transsylv. 492, 1866.

and those of sporadic occurrence as forms. The glabrous *Ranunculus abortivus* is predominantly southern, the pilose var. *acrolasius* is northern.<sup>7</sup> Typical *Sphenopholis obtusata*, with leaves glabrous or scabrous, is irregularly dispersed over the eastern half of the United States, but is largely replaced by the pilose-leaved var. *pubescens* on the Coastal Plain and outer Piedmont.<sup>8</sup> On the other hand, *Alnus rugosa* var. *typica*, with essentially glabrous leaves, ranges from Nova Scotia to Michigan, south to New England, Pennsylvania, and Indiana;

forma *emersoniana*, with leaves permanently pilose-tomentulose on the lower surface, is "of essentially the same range but forming individual and constant large colonies."<sup>9</sup> *Veronica connata* and its var. *glaberrima* seem much more comparable to the examples cited as varieties than to that treated as a form.

Conclusion: the name *Veronica connata* Raf. is probably valid for the species described by Pennell as *V. catenata* and treated by Fernald as *V. salina* Schur; the eastern glandular phase and the western glabrous phase are better treated as geographic varieties than as forms.

<sup>7</sup> FERNALD, *Rhodora* 40: 417-420. 1938.

<sup>8</sup> FERNALD, *Rhodora* 43: 533. 1941.

<sup>9</sup> FERNALD, *Rhodora* 47: 345-350. 1945.

ENTOMOLOGY.—*Revision of the genus Nysius in the United States and Canada (Hemiptera Heteroptera: Lygaeidae).*<sup>1</sup> H. G. BARBER, Roselle, N. J. (Communicated by P. W. OMAN.)

The genus *Nysius*<sup>2</sup> was described by Dallas in 1852 with 11 included species. Since that time several of these species have been transferred to other genera, but so many have been added that it has become a very large aggregation. Because of their general similarity and the wide dispersal of certain species considerable synonymy has resulted in the literature.

Stål, 1874, Horvath, 1890, Baker, 1906, and Usinger, 1942, have published complete or partial revisions of the genus; however, only that of Baker is restricted to the western world. Horvath's synopsis indicated some important characters, in addition to those mentioned by Stål for distinguishing the Palearctic species. In consequence, while the European species have been clearly recognized, some confusion has existed with reference to the application of certain specific names for forms occurring in the United States.

Both Uhler and Baker contributed to this confusion by failure to recognize the

true identity of several previously described species. Whatever may have been his earlier views Uhler, in his *Check list of Hemiptera Heteroptera of North America*, 1886, apparently expressed his latest ideas in regard to the valid specific names. He erroneously cited *ericae* Schilling as a synonym of *thymi* Wolff and listed both *raphanus* Howard and *destructor* Riley as synonyms of his *angustatus*. In his *Observations upon heteropterous Hemiptera of Lower California*, 1894, he redescribed William Howard's *raphanus* as *strigosus* and a year later in the *Preliminary list of the Hemiptera of Colorado*, 1895, he again described the same species as *minutus*. The synonymy of this species should be stated as follows: *N. raphanus* Howard, 1862 = *destructor* Riley, 1863 = *strigosus* Uhler, 1894 = *minutus* Uhler, 1895.

Baker, in his *Notes on the Nysius and Ortholomus of America*, 1906, made several glaring errors through failure to recognize the identity of the Uhler species and through omission of any mention of either *raphanus* or *ericae*. His *angustatus* is evidently a mixed species, containing both Uhler's true *angustatus* and *ericae*. Having failed to recognize Uhler's species he redescribed it as *coloradensis*. Also mistaking the nature of Uhler's *strigosus* he synonymy-

<sup>1</sup> Received May 6, 1947.

<sup>2</sup> It has been demonstrated by W. E. CHINA, *The generic names of British insects*, p. 243, 1943, and also by R. L. USINGER and R. I. SAILER, *Proc. Ent. Soc. Washington* 46: 260, 1944, that this generic name will have to be changed unless conserved by action of the International Commission on Zoological Nomenclature.